Abstract

Title: Study of relationship between G+276 T polymorphism in Adiponectin gene with insulin resistance and oxidative stress parameters in non-alcoholic fatty liver patients

Backgrounds and Aims: Genetic and environmental factors are both involved in etiology of non-alcoholic fatty liver disease (NAFLD). Among the genetic factors, some polymorphisms of adiponectin gene are associated with NAFLD. The gene coding for adiponectin is involved in regulating glucose levels as well as fatty acid breakdown. The purpose of this study is Study of relationship between G+276 T polymorphism in Adiponectin gene with insulin resistance and oxidative stress parameters in non-alcoholic fatty liver patients.

Methods: In this study, 75 patients with NAFLD and 75 healthy individuals were enrolled. Insulin resistance was estimated by the homeostasis model (HOMA-IR), Malondialdehyde (MDA) level, serum total antioxidant capacity (TAC) are measured with different genotypes.

Results: in order to different genotypes of this polymorphism **(**TT, TG, GG), in our study, insulin resistance and HOMA-IR had not shown significant association with different genotypes of +276 G/T polymorphism in NAFLD patients. There was no difference observed in Malondialdehyde (MDA) level. TAC level in TT genotype was significantly lower in patients in compared to healthy subjects with the same genotype.

Conclusions: TAC level in patients with TT genotype was significantly lower than control group.

Keywords: Adiponectin gene**,** +276 G>T polymorphism, nonalcoholic fatty liver disease (NAFLD), insulin resistance, oxidative stress